

REMARKS

Claims 7, 10, 12-23, 37, and 40-42 are pending after entry of this response. Claims 10 and 37 have been amended. Claim 6 has been cancelled. Claim 42 is new and is based on claim 6. The Examiner has withdrawn the allowability of claims 6, 10, 12, 13 and 37. However claim 7 has been allowed. Claim 37 has been made dependent on claim 10.

Claim 10 has been amended to recite that the viscosity is above 2,000 PaS. Support for this amendment can be found in original claim 2 of the corresponding PCT application. No new matter has been added.

§103 Rejections.

The Examiner has rejected claims 10, 12, 13, 37, 40 and 41 under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 4,941,773 (Vergouw et al.). The Examiner has taken the position that Vergouw discloses heat insulation in the form of a gelling material for pipeline bundles, and a method of filling the space in a bundle of pipelines with a gelling material that fills the voids between the pipes. The Examiner notes that the gel in Vergouw has a viscosity between 10 and 1000 PaS.

Claim 6, 14, 16, 18-20, 22, 23, 37, 40 and 41 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Vergouw in view of U.S. Pat. No. 5,571,315 (Smith et al.) or U.S. Pat. No. 6,297,201 (Geib). The Examiner has cited these secondary references as disclosing that the gelling material comprises orthophosphate or a ferric crosslinking agent.

The Examiner has rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Vergouw in view of US Pat. No. 6,978,825 (Baylot). The Examiner has cited Baylot as disclosing adding incompressible material (microspheres), such as glycols, bitumens, tars or waxes to an outer/internal envelope pipe coating to provide enhanced heat insulation to the pipe bundles used in underwater depth operations.

Claims 15 and 21 have been rejected under 35 U.S.C., §103(a) as being unpatentable over Vergouw in combination with Bayot and either Smith or Geib.

Claim 10 has been amended to require a viscosity of over 2,000 Pa.S. Vergouw is limited to a viscosity in the range of 10 to 1000 Pa.S. This is not an insignificant difference since materials with such diverse viscosities are structural and functionally distinct. Furthermore, there is no overlap or even "closeness" between the ranges and so it is respectfully submitted that claim 10 is novel with respect to Vergouw. The cited case law refers to claims with sub-ranges that fall within earlier disclosed ranges and parameters which are very close between the claimed invention and the prior art. Present claim 10 is not a sub-range of the range disclosed in Vergouw and also has a lower limit twice the upper limit of the range disclosed in Vergouw. Accordingly, the disclosed parameters are not at all close.

Applicant acknowledges that the abstract of Vergouw does state the range therein is "preferably" between 10 and 1000 Pa.S. However, the abstract must be read in light of the entire specification. As stated in column 1, lines 42 - 46 and claim 1 in Vergouw, the invention described in Vergouw is specifically limited to the range 10 and 1000 Pa.S. While column 2, line 37 refers to the viscosity, it also includes other features so it is not clear to a person skilled in the art what the preferred and essential features are in Vergouw.

Even if, assuming *arguendo*, it was considered that Vergouw is not limited to the range of between 10 and 1000 Pa.S, it does clearly teach that the fluid must be liquid - see column 4, lines 52 to 53 that "as the gel is not solid, it is easily capable of flowing as a thick fluid...." Indeed in order for the pressure balancing pig 13 to function as taught in Vergouw, the gel needs to be able to flow. Thus, a person of ordinary skill in the art would consider that increasing the viscosity beyond the parameters stated in Vergouw would not allow the invention to work because the gel would solidify, and certainly increasing the viscosity to having a minimum value twice the maximum value stated in the Vergouw would be incompatible with the invention of Vergouw.

Against this teaching, the inventor of the present invention prefers to utilize a "solid" gel, that is a gel with a viscosity of over 2000 Pa.S. However, a person of ordinary skill in the art, in view of Vergouw, would understand from Vergouw that such a modification to double the upper limit of the viscosity and increase the optimum viscosity of 100 Pa.S (column 1 line 50) 20-fold would not work since the gel will solidify. Thus, given the magnitude of the difference in the

viscosities of Vergouw and the present invention, the teaching in Vergouw to stay within the stated range and the incompatibility in modifying the invention of Vergouw to that now claimed, it is respectfully submitted that claim 10 is allowable over Vergouw.

The secondary references, namely Bayot, Smith and Geib, do not remedy this deficiency in the Vergouw reference. These secondary references were cited as disclosing different aspects of the dependent claims and do not provide a teaching of the viscosity now claimed. Furthermore, even were any of these references to disclose a higher viscosity, they would not properly be combinable with Vergouw since, as discussed above, Vergouw teaches against using a solid gel.

Accordingly, based on the foregoing, it is respectfully submitted that claim 10 is patentable over Vergouw, alone or in combination with any other reference of record. Claims 12-23, 37, and 40-42 depend from claim 10, and it is respectfully submitted, without prejudice to their individual merits, that they are also allowable over Vergouw. Furthermore, Applicant disagrees that a person of ordinary skill in the art would combine Vergouw and Smith since Vergouw is concerned with insulation whereas Smith is concerned with a robust material for fracturing. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection to claims 10, 12-23, 37, and 40-42.

In view of the foregoing, Applicant submits that all the pending claims are allowable over the prior art of record. Should the Examiner have any questions or comments regarding this response, the Examiner is asked to contact Applicant's undersigned representative.

Respectfully submitted,

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